

door; the enemy following, and finding the main tube empty, would leave.* In my studies of the nests and food habits of *Myrmekiaphila foliata*,† I found indications that the main tube was constructed to serve as a gallery for the passage of ants, or other insects, and that the branch was constructed as a real trap, in which the spider awaited the passing of an ant, when it would open the door and catch the insect. The arguments I then advanced, briefly stated, are: 1st, the nests then found were all made in places where ants had underground passages, 2nd, the main tube connected with some of the ant's galleries, 3rd, the trap-door at the surface of the ground had the appearance of being little used, and 4th, one nest had only one door leading into a short tube. This tube opened into the floor of a broad hall of the ant's nest leading into several galleries. Near this broad hall was the opening to the surface of the ground, made by the ants, and through which the spider probably entered the hall to construct her "branch tube" in the floor.

In May 1888, at Chapel Hill, N. C. I found a nest of *Myrmekiaphila fo-*

liata, under conditions which seem to give conclusive evidence that the main tube is intended to entrap unwary insects that they might be "gobbled in" as they pass the door of the branch where the spider remains. The nest was made in a broad foot path, where the clay soil was very hard. I discovered it by seeing the open door. The following day I visited the place with trowel in hand to dig up the spider. I found the door still open. The main tube was about nine inches long, the branch about one inch long and was situated six inches from the surface of the ground. In this I found the spider. The door to the branch was a *cork* door, while that at the surface of the ground was a *wafer* door. It appears in cases where the nest is not made in an ant's nest, that the outer door is set open, thus offering an attractive place for insects that are crawling on the surface of the ground in search of food. They enter the main tube, and as they pass the branch, the door is suddenly thrown open, and to their surprise they are taken captive and made a meal of by the cunning spider.

MATING OF SAMIA CYNTHIA IN CAPTIVITY.

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Last winter I received from Nantucket cocoons of *Samia cynthia* and on the 5th of May, 1888, at 11-30 A. M., a ♂ and ♀ emerged and crawled up the

side of my pupa-box at the same time. I removed them to a cage to see if they would mate in captivity.

My cage consists of a shallow flower-pot, seven inches in diameter and nearly full of sand; a circle of heavy cop-

* Harvesting Ants and Trap-Door spiders.

† Entomological Americana, Oct. & Nov. 1886.

per wire six inches in diameter, to which are attached four movable uprights of the same wire; and a piece of netting.

When set the uprights are stuck into the sand at equal distances, supporting the copper ring at about six inches from the top of the flower pot. The netting is spread over this frame and held to the flower-pot by a rubber band, making an airy cage, the top of which is flat, enabling the moths to hang from it. This cage I put on a table in a room with one window partly open.

The two moths were very quiet all the next day, 9th May, but on the 10th the male crawled about the netting, without seeming to notice the female, who was still quiet, only opening and shutting her wings now and then. I set the cage so that the female was nearest the open window but more than ten feet away from it. Soon after nine in the evening the male began to seem excited and to vibrate his wings so fast that they made a dull buzzing sound, loud enough to attract my attention at the far end of the room. I kept a light until eleven o'clock and all the time the male either kept up the buzzing vibration, or crawled over the netting near the female, opening and shutting his wings as if to display them. As soon as the light

was out I heard a great fluttering, which stopped before half-past eleven.

The next morning the moths were *in coitu* hanging from the top of the cage, and so remained until 6.30 P. M., when they separated, and for about an hour were very quiet.

I then put the female into a box covered with netting and before 10 P. M. she had laid 159 eggs.

11th	May	she	laid	So	eggs.
12th	"	"	"	40	"
13th	"	"	"	21	"
14th	"	"	"	13	"
15th	"	"	"	10	"
16th	"	"	"	6	"
17th	"	"	"	6	"
18th	"	"	"	6	"

making a total of 341 eggs.

The last eggs were pure white, without the dark spots characteristic of the others. All the eggs were laid before midnight and most of them before 10 P. M. On 19th of May the female died, the male I had let fly on the third day.

Both emitted a rank odor, not unlike that of *Ailanthus*-flowers and I could not perceive that the odor of the female was stronger or different from that of the male though I tested them in separate rooms.

INSECT LIFE. Under this title the United States Entomologist begins the publication of a periodical bulletin to be issued on an average once a month. It will contain brief notes and papers which are not adapted for the annual reports or the special bulletins of the Division. The first numero is dated

July 1888 and contains among other interesting matter a complete life-history of the Willow-shoot Saw-fly (*Phylloecus integer*). Dr. Williston describes and figures *Lestophornus iceryae* a new genus and species of *Oscinidae* parasitic on the fluted scale (*Iceya purchasi*).